

Inventors: Ruoslahti and Pasqualini
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In the claims:

~~Please cancel claims 1 to 12.~~

~~Please add the following claims:~~

~~13. (New) A conjugate, comprising a peptide that selectively homes to brain linked to a moiety, wherein said moiety is selected from the group consisting of a toxin, drug, chemotherapeutic agent, cell and liposome.~~

~~14. (New) A peptide that selectively homes to brain, consisting of the amino acid sequence:~~

~~X₁SRLX₂ (SEQ ID NO: 45),~~

~~wherein X₁ and X₂ each is 1 to 10 independently selected amino acids.~~

~~15. (New) The peptide of claim 14, comprising the amino acid sequence CLSSRLDAC (SEQ ID NO: 3).~~

~~16. (New) The peptide of claim 15, consisting of the amino acid sequence CLSSRLDAC (SEQ ID NO: 3).~~

~~17. (New) The peptide of claim 14, comprising the amino acid sequence CNSRLHLRC (SEQ ID NO: 1).~~

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18. (New) The peptide of claim 17, consisting of the amino acid sequence CNSRLHLRC (SEQ ID NO: 1).

19. (New) The peptide of claim 14, comprising the amino acid sequence CNSRLQLRC (SEQ ID NO: 5).

20. (New) The peptide of claim 19, consisting of the amino acid sequence CNSRLQLRC (SEQ ID NO: 5).

21. (New) A conjugate, comprising a peptide that selectively homes to brain linked to a moiety, said peptide consisting of the amino acid sequence:

X_1SRX_2 (SEQ ID NO: 45),

wherein X_1 and X_2 each is 1 to 10 independently selected amino acids, and

wherein said moiety is selected from the group consisting of a toxin, drug, chemotherapeutic agent, cell and liposome.

22. (New) The conjugate of claim 21, said peptide comprising an amino acid sequence selected from the group comprising CNSRLHLRC (SEQ ID NO: 1), CLSSRLDAC (SEQ ID NO: 3) and CNSRLQLRC (SEQ ID NO: 5).

23. (New) The conjugate of claim 22, said peptide consisting of an amino acid sequence selected from the group consisting of CNSRLHLRC (SEQ ID NO: 1), CLSSRLDAC (SEQ ID NO: 3) and CNSRLQLRC (SEQ ID NO: 5).

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(24) (New) A peptide that selectively homes to brain consisting of the amino acid sequence:

X_3VLRX_4 (SEQ ID NO: 46),

wherein X_3 is absent or is 1 to 10 independently selected amino acids and X_4 is 1 to 20 independently selected amino acids, wherein said peptide is cyclic.

(25) (New) A conjugate, comprising a peptide that selectively homes to brain linked to a moiety, said peptide consisting of the amino acid sequence:

X_3VLRX_4 (SEQ ID NO: 46),

wherein X_3 is absent or is 1 to 10 independently selected amino acids and X_4 is 1 to 20 independently selected amino acids, and

wherein said moiety is selected from the group consisting of a toxin, drug, chemotherapeutic agent, cell and liposome.

26. (New) The conjugate of claim 25, said peptide comprising an amino acid sequence selected from the group comprising CVLRGGRC (SEQ ID NO: 4) and WRCVLREGPAGGCAWFNRHRL (SEQ ID NO: 16).

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~~27.~~ (New) The conjugate of claim 26, said peptide consisting of an amino acid sequence selected from the group consisting of CVLRGGRC (SEQ ID NO: 4) and WRCVLREGPAGGCAWFNRHRL (SEQ ID NO: 16).

Sub 25
~~28.~~ (New) A peptide that selectively homes to brain, comprising the amino acid sequence CVLRGGRC (SEQ ID NO: 4).

29. (New) The peptide of claim 28, consisting of the amino acid sequence CVLRGGRC (SEQ ID NO: 4).

Sub B' 26 cont
~~30.~~ (New) A peptide that selectively homes to brain, comprising the amino acid sequence WRCVLREGPAGGCAWFNRHRL (SEQ ID NO: 16).

31. (New) The peptide of claim 30, consisting of the amino acid sequence WRCVLREGPAGGCAWFNRHRL (SEQ ID NO: 16).

Sub 27
~~32.~~ (New) A peptide that selectively homes to brain, comprising the amino acid sequence CENWWGDVC (SEQ ID NO: 2).

33. (New) The peptide of claim 32, consisting of the amino acid sequence CENWWGDVC (SEQ ID NO: 2).

Sub 28
~~34.~~ (New) A peptide that selectively homes to brain, comprising the amino acid sequence CGVRLGC (SEQ ID NO: 6).

35. (New) The peptide of claim 34, consisting of the amino acid sequence CGVRLGC (SEQ ID NO: 6).

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Sub D9
36. (New) A peptide that selectively homes to brain,
comprising the amino acid sequence ~~CKDWGRIC (SEQ ID NO: 7)~~.

37. (New) The peptide of claim 36, consisting of the
amino acid sequence CKDWGRIC (SEQ ID NO: 7).

Sub D10
38. (New) A peptide that selectively homes to brain,
comprising the amino acid sequence ~~CLDWGRIC (SEQ ID NO: 8)~~.

B cont
39. (New) The peptide of claim 38, consisting of the
amino acid sequence CLDWGRIC (SEQ ID NO: 8).

Sub D11
40. (New) A peptide that selectively homes to brain,
comprising the amino acid sequence ~~CTRITESC (SEQ ID NO: 9)~~.

41. (New) The peptide of claim 40, consisting of the
amino acid sequence CTRITESC (SEQ ID NO: 9).--

II. REMARKS

Applicants herein reaffirm the election of Group I (claims 1 to 8). Elected claims 1 to 8 are pending, with claims 9 to 12 withdrawn from further consideration as drawn to non-elected inventions. Claims 1 to 8 have been canceled, and new claims 13 to 41 added. Thus, claims 13 to 41 are presently under examination.